Nova Scotia Health

CardioVascular HEALTH NOVA SCOTIA BULLETIN

IMPROVING CARDIOVASCULAR HEALTH OF NOVA SCOTIANS

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Welcome to the Cardiovascular Health Nova Scotia (CVHNS) quarterly e-mail bulletin. The Bulletin has been created to share information about the program's activities, related cardiovascular health initiatives, and ideas from around the province.

hs-CRP: A USEFUL NONTRADITIONAL RISK FACTOR?

A recent trial, JUPITER[1] was designed to answer the clinical question do statins prevent cardiovascular events in persons with normal low density lipoprotein (LDL) and elevated high sensitivity C-reactive protein (hs-CRP)? The trial was stopped early as it provided evidence that 20 mg daily of rosuvastatin lowered LDL, hs-CRP and rates of cardiovascular events. The results of JUPITER raise two important questions about primary prevention of cardiovascular events.

Should statin indications be expanded?

Although the relative risk reductions achieved in JUPITER were significant, the absolute risk reductions were small (1.2%) and the NNT was 82 for 1.9 years. The trial also noted significantly higher glycated hemoglobin levels and incidence of new onset diabetes in the rosuvastatin group (3.0% vs. 2.4% p=0.01). The estimated drug cost to avoid one primary outcome event in Nova Scotia is estimated at $104,635. Given these findings, the clinical relevance, safety and cost effectiveness of treatment in this population requires further consideration.

Should hs-CRP be used in practice?

The U.S. Preventive Services Task Force[2] released a statement in October 2009 that does not support the use of hs-CRP in screening of asymptomatic men and women with no history of coronary heart disease. The positions in this statement, based on systematic reviews of the evidence, are that:

- JUPITER did not address the issue of whether using hs-CRP in addition to Framingham risk assessment (FRA) would reduce CVD events beyond the use of Framingham risk assessment alone and no other treatment studies answer this question.
- More research is required related to the benefits and harms of aggressive treatment of persons reclassified from intermediate to high risk based on tests such as hs-CRP.
- Although there is some evidence of benefit of hs-CRP to traditional Framingham risk factors in those at intermediate risk, the net benefit of hs-CRP testing is of uncertain magnitude because of the lack of

information on harms and benefits of using nontraditional risk factors in coronary heart disease screening.

- When the evidence for effectiveness is clearer, evaluation of cost effectiveness should be a research priority.

The new Canadian dyslipidemia guidelines[3] recommend that hs-CRP be used in men older than 50 years and women older than 60 years of age who are at intermediate risk (10-19%) according to their FRA and who do not otherwise qualify for lipid-lowering therapy (ie, if their LDL-C is less than 3.5 mmol/L).

Given the differences in expert consensus and the need for additional research to assess the harms, benefits and cost effectiveness of therapy, Cardiovascular Health Nova Scotia does not recommend the widespread use of hs-CRP but acknowledges that there may be value in testing those at intermediate risk, as per the Canadian Guidelines. Testing in those at intermediate risk should be at the discretion of the physician until the evidence supporting the net benefits of therapy in this population is clearer.

Reference:

[1] Ridker PM, Danielson E, Fonseca FA, Genest J, et al. The JUPITER Study Group. Rosuvastatin to Prevent Vascular Events in Men and Women with Elevated C-Reactive Protein. N Engl J Med 2008; 359:2195-207.

[2] U.S. Preventive Task Force. Using Nontraditional Risk Factors in Coronary Heart Disease Risk Assessment: U.S. Preventive Task Force Recommendation Statement. Annals of Internal Medicine, 2009; 151(7): 474-482

[3] Genest J, McPherson R, Frohlich J, et al. Canadian Cardiovascular Society/Canadian guidelines for the diagnosis and treatment of dyslipidemia and prevention of cardiovascular disease in the adult –2009 recommendations. Canadian Journal of Cardiology. 2009; 25(10): 567-579.

Learning Opportunities

Preventive Cardiovascular Nursing Association 16th Annual Symposium, April 15-17, 2010. Chicago, IL. www.pcna.net.

Atlantic Cardiovascular Conference, April 23-24, 2010. Halifax, NS. www.cme.medicine.dal.ca.

Canadian Association of Cardiac Rehabilitation Annual Meeting and Symposium 2010 Abstract Application Deadline April 30, 2010, Montreal, QC. www.cacr.ca/professional_development/symposium2009.htm.

Atlantic Chronic Disease Congress, May 13-14, 2010, Dieppe/Moncton, NB. www.acdc-camc.ca.

Canadian Cochrane Network and Centre 8th Annual Symposium-Evidence In Uncertain Times, May 19-20, 2010, Ottawa, ON. www.ccncsymposium.com.

Quality of Care and Outcomes Research 2010 Preconference Workshop: Transitioning Patients with Heart Failure from Hospital to Home, May 19, 2010. Washington, DC. www.americanheart.org

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Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke 2010 Scientific Sessions, May 19-21, 2010. Washington, DC. www.americanheart.org

1st Canadian Stroke Congress, June 7-8, 2010. Quebec City, QC. www.strokecongress.ca.

The Canadian Nurses Association Biennial Convention, June 7-9, 2010. Halifax, NS. www.cna-aiic.ca.

17th International G-I-N (Guidelines International) Conference, August 25-28, 2010. Chicago, IL. www.gin2010.org.

23rd Scientific Meeting of the International Society of Hypertension, September 26-30, 2010. Vancouver, BC. www.vancouverhypertension2010.com.

CVHNS News

Stroke Coordinator Role

All district health authorities now have a designated Stroke Coordinator to assist the districts with implementing best practices in stroke care. There are coordinators located in South Shore Health, South West Health, Annapolis Valley Health, Cape Breton District Health, and Capital Health. The coordinator roles are shared in Colchester/Cumberland and Pictou/GASHA. These are key positions that have been shown in other jurisdictions such as the Ontario Stroke Strategy to facilitate changes in practice and re-organization of services. The Stroke Coordinator acts as a resource to the district and can fill a number of roles, including providing support for stroke steering committees and working groups, identifying and acting on gaps in local stroke service delivery, liaising with physician leads, disseminating guidelines, providing or coordinating professional education based on local needs, and ensuring that patient education materials are available. CVHNS provides Stroke Coordinators with the opportunity to meet by teleconference and face to face in order to share their experiences and tools, and to learn from each other about how to support the implementation of stroke programs in the province. For more information, contact Katie White, katie.white@cdha.nshealth.ca or Corinne Corning, corinne.corning@cdha.nsheatlh.ca, Stroke Consultants, Cardiovascular Health Nova Scotia.

Development of a Cultural Competence Assessment Tool for Provincial Program Clinical Guidelines

The tool, as developed by a consultant and working group, is now available for use by provincial programs. As provincial programs, we are excited to know that the use of the tool and the principles it embodies will help ensure that any development/revision of guidelines considers gender, culture, and/or health disparities (both in context and content). We look forward to using a tool that will guide our work and be more reflective of our diverse populations. For more information, contact Peggy Dunbar, Manager, Diabetes Care Program of Nova Scotia peggydunbar@diabetescareprogram.ns.ca.

Provincial Programs Hypertension Initiative

The three provincial programs (Cardiovascular, Diabetes, and Renal) along with Primary Health Care, Health Promotion and Protection, and our partner health charities (the Canadian Diabetes Association, the Heart and Stoke Foundation of

Nova Scotia, and the Kidney Foundation of Nova Scotia) will be co-hosting a Hypertension Stakeholder Forum at Pier 21 in Halifax on March 29, 2010. As this is a topic that crosses sectors and is of interest to many, we will be extending invitations to an array of stakeholder representative of health, education, recreation, agriculture, the food industry, academia, etc. Stay tuned for activities related to and resulting from this Forum.

Implementation of ACS Guidelines

In 2008, Cardiovascular Health Nova Scotia released the *Nova Scotia Guidelines for Acute Coronary Syndromes*. Shortly after, Dr. Ata Quraishi was charged with the responsibility of implementing these guidelines in CDHA. Two implementation teams were formed, one for NSTEMI/UA and the other for STEMI patients. A multidisciplinary group of health professionals (database coordinator, nurses, nurse managers, emergency room physicians, cardiologists, interventional cardiologists, paramedics and pharmacists) from all sites in the Capital District Health Authority were invited to participate on these committees. Representatives from EHS and Lifeflight were also invited.

The NSTEMI/UA committee reviewed the guidelines and determined the need to focus on updating existing order sets and developing a new cardiac catheterization laboratory referral form to risk stratify patients who are referred to the tertiary care centre for cardiac catheterization and percutaneous coronary interventions (PCI). The STEMI committee focused on updating existing order sets and protocols and expansion of the primary PCI service in CDHA. This NSTEMI/UA committee has completed its mandate and will meet as needed in the future; however, the STEMI committee continues to meet monthly.

During these monthly STEMI meetings, committee members review all primary PCI cases for the previous month. Data such as door to ECG time, door to balloon time and first medical contact to balloon time are reviewed. Each case that does not meet the benchmark (door to balloon time >90 minutes) is discussed and the case explored further if need be to determine the cause of the delay. The team works together to come up with solutions to the delays. Recently, a sub-committee worked on a solution to improve door to ECG times at the QEII and was able to reduce times considerably. Currently, the committee is working on synchronizing clocks in the areas, improving access to EHS charts and exploring ways to improve the transfer time of patients to the cath lab from Dartmouth General Hospital and Cobequid.

This committee has assisted CDHA in improving their door to ECG and door to balloon times and helped build relationships between the staff of referring emergency departments, EHS and the cath lab. This continuous quality improvement committee model is one that could easily be adopted by other districts to review data on a monthly basis. For further information, contact Dr. Ata Quraishi, ata.quraishi@cdha.nshealth.ca.

Helpful Resources

Trends in Risk Factors for CV Disease in Canada
Lee D, Chiu M, Manuel D, et al. Trends in risk factors for cardiovascular disease in Canada: temporal, socio-demographic and geographic factors. *Canadian Medical Association Journal*. 2009; 181(3/4),E55-66.

CCS-Canadian Perspective Videos
Videos on demand are now available on the CCS site; these videos provide insight on how findings presented at international meetings can affect and/or be applied to Canadian clinical practice. Visit: www.ccs.ca/professional_development.

2009 Focused Updates ACC/AHA Guidelines for ST-Elevation Myocardial Infarction and ACC/AHA SCAI Guidelines on PCI
Kushner K, Hand M, Smith S, et al. 2009 Focused Updates: ACC/AHA Guidelines for the Management of Patients with ST-Elevation Myocardial Infarction (updating the 2004 guideline and 2007 focused update) and ACC/AHA/SCAI Guidelines on Percutaneous Coronary Intervention (updating the 2005 guideline and 2007 focused update): a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2009; 120:2271-2306.

2009 Heart Failure Reference Pocket Guide:
Is this Heart Failure and What should I do? Available in three media types on the Education Tools and Resources Page at www.hfcc.ca.

Stroke Unit Guide:
The Canadian Stroke Strategy recently released a Guide to the Implementation of a Stroke Unit—a step by step guide to the development and implementation of a stroke unit. Visit www.canadianstrokestrategy.ca/eng/home.html.

The Heart and Stroke Foundation of Canada Annual Report:
A report on the looming cardiovascular crisis for Canadians called "A Perfect Storm—The Heart and Stroke Foundation's 2010 Annual Report on Canadian Health". Visit www.heartandstroke.com.

Innovative Ideas

Improving Door to EKG Time at the QEII
A ST segment elevation myocardial infarction (STEMI) is a true time sensitive emergency. Every minute that delays definitive care for these patients has a negative impact on outcome. At the QEII, definitive care is typically primary percutaneous coronary intervention (PPCI). Promptly obtaining an ECG and making the diagnosis in the emergency department (ED) results in expedited PPCI and improved patient outcomes.

In an effort to improve time to definitive care for STEMI patients in our institution, we recently made a number of changes to expedite "door to ECG" times for walk in patients in our ED. The first medical contact (the triage paramedic) screens all walk in patients for symptoms that may represent a STEMI. If there is any suspicion of this, the triage medic directly pages the ECG technician for a STAT "triage ECG". We now have a dedicated "triage ECG" bed located immediately behind the triage counter. With our recent changes, the ECG technicians are now stationed with us in the ED 24 hours a day, close to the triage ECG bed. With the new protocol, the technicians place the completed triage ECG directly in the hands of the ED physician working in Pod1 (beside triage) for immediate interpretation. STEMI patients are now identified earlier, "door to ECG" times have improved, and patients are receiving definitive care sooner which has been shown to improve outcomes for this patient population. For more information, contact Dr. Jennifer McVey, QEII Emergency Department, 902-473-3383.

Guidelines Into Practice
The stroke coordinator in SSDHA has adopted an innovative strategy to increase adherence to best

practice guidelines. Recognizing that busy physicians do not always have the time to read and absorb the extensive literature on best practice guidelines for stroke care, Schelene has tried to bring the guidelines to them – when and how they need them. Summary recommendations from the guidelines, tailored and relevant to a particular patient's care (e.g. lipid management guidelines), are photocopied and placed on the chart; this makes the guidelines more timely and accessible for physicians with the aim of improving care for every patient with a stroke in the district. For more information, please contact Schelene Swinemar, Stroke Coordinator for SSDHA – sswinemar@ssdha.nshealth.ca.

Team Learning Opportunities

AVDHA is taking advantage of the team based approach to stroke care to provide an inter-professional learning day for stroke. Team members will have a chance to learn from and with each other, deepen their understanding of each others' roles and understand where roles overlap—all in the interest of providing the best possible care for stroke patients. Topics that will be covered in this initiative include communication and swallowing strategies (SLP), mobility and shoulder care (PT), role of the NP in stroke (NP), OT tools in stroke recovery (OT), and the role of social work in stroke (SW), among others. This idea has caught on in other districts that are now starting to consider similar events. For more information, contact Deb Mander, Stroke Coordinator, AVDHA—dmander@avdha.nshealth.ca.

New Website—Inventory of Guidelines

The provincial programs of the Nova Scotia Department of Health have developed a website that provides access to an inventory of practice guidelines that they have developed or endorsed. The inventory includes guidelines for prevention, screening and management of cancer, diabetes, renal and cardiovascular diseases, as well as guidelines for reproductive care. The guidelines do not represent a complete set for each disease. They have been tailored to the Nova Scotia context by addressing the specific needs of the population and considering the specific services available within the province. The website is now live. Visit www.gov.ns.ca/healthguidelines

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